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A CANDY-HANDY APPROACH TO FASTER LEARNING.

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THE EDUCATION IMPROVEMENT PROJECT (EIP) IS A 5-YEAR EDUCATIONAL RESEARCH PROGRAM FOR ECONOMICALLY DISADVANTAGED CHILDREN RANGING IN AGE FROM INFANCY TO 14 YEARS. THE INITIAL PHASE OF EIP CONSISTS OF INFANT TESTING WHICH BEGINS AT BIRTH. DATA ON INTELLIGENCE AND DEVELOPMENT FROM THIS PHASE OF THE PROGRAM SHOW THAT AMONG THESE CHILDREN THE DECELERATION OF GROWTH RATE BEGINS AT 18 MONTHS. TO HELP THE YOUNGSTERS CATCH UP WITH THEIR MIDDLE-CLASS COUNTERPARTS, EIP BEGINS ITS EDUCATIONAL PHASE IN NURSERY SCHOOLS FOR 2-, 3-, AND 4-YEAR-OLDS. IN ALL CLASSES EMPHASIS IS GIVEN TO SPECIAL TEACHING TECHNIQUES AND TO LEARNING BASED ON CONCRETE EXAMPLES AND MATERIALS. ONE OF THE MANY TECHNIQUES USED BY THE PROGRAM IS "BEHAVIOR MODIFICATION". THROUGH A SYSTEM OF REWARDS FOR PROPER BEHAVIOR, THIS APPROACH AIMS TO INCREASE CHILDREN'S POTENTIAL FOR LEARNING. OTHER ASPECTS OF THE PROJECT INCLUDE SPECIAL EFFORTS TO KEEP CHILDREN IN SCHOOL AND A "FUTURE PARENTS" PROGRAM FOR POTENTIAL TEENAGE DROPOUTS. WITH THE EXCEPTION OF GRADED CLASSES, THE PROJECT IS STRICTLY VOLUNTARY, AND ALL CLASSES ARE HELD AT PUBLIC SCHOOLS. THIS ARTICLE WAS PUBLISHED IN THE "SOUTHERN EDUCATION REPORT," VOLUME 3, NUMBER 1, JULY-AUGUST, 1967. (NA)

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PICTURE CREDITS

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By David Cooper

"Here, Johnny," said the teacher. "Here's a candy for trying when I asked you a question."

Candy in the classroom? Yes—in special classrooms in Durham, N. C., that are part of an unusual education research program that begins in the cradle. One of the major findings to date of the Durham Education Improvement Project is that a system of rewards works better in the classroom than the standard system of punishment used in most of the nation's schoolhouses.

The Durham EIP, a five-year project financed by the Ford Foundation, is working with youngsters from poverty-stricken homes. The children range in age from tiny infants to 14-year-olds, who are part of a "future parents" program.

Under the program, educators are trying to find ways to help economically deprived children, Negro and white, catch up with their middle-class counterparts when they start public schools. They are seeking, according to Dr. Robert L. Spaulding, the project's director, to discover how soon before the first grade children of poverty need preschool classroom instruction to help them make up for their deficiencies. In the process, the Durham EIP is using methods that Spaulding says are new to public classrooms, with children from 2 to 6 years old.

Spaulding and his co-workers call it "behavior modification." In short, it is an attempt to change the behavior patterns of youngsters so they will learn more and better.

David Cooper is the North Carolina correspondent for Southern Education Reporting Service and is Raleigh correspondent for the Winston-Salem Journal *and* Sentinel.

Dr. Robert L. Spaulding says stopping one act of misbehavior won't necessarily prevent another one.

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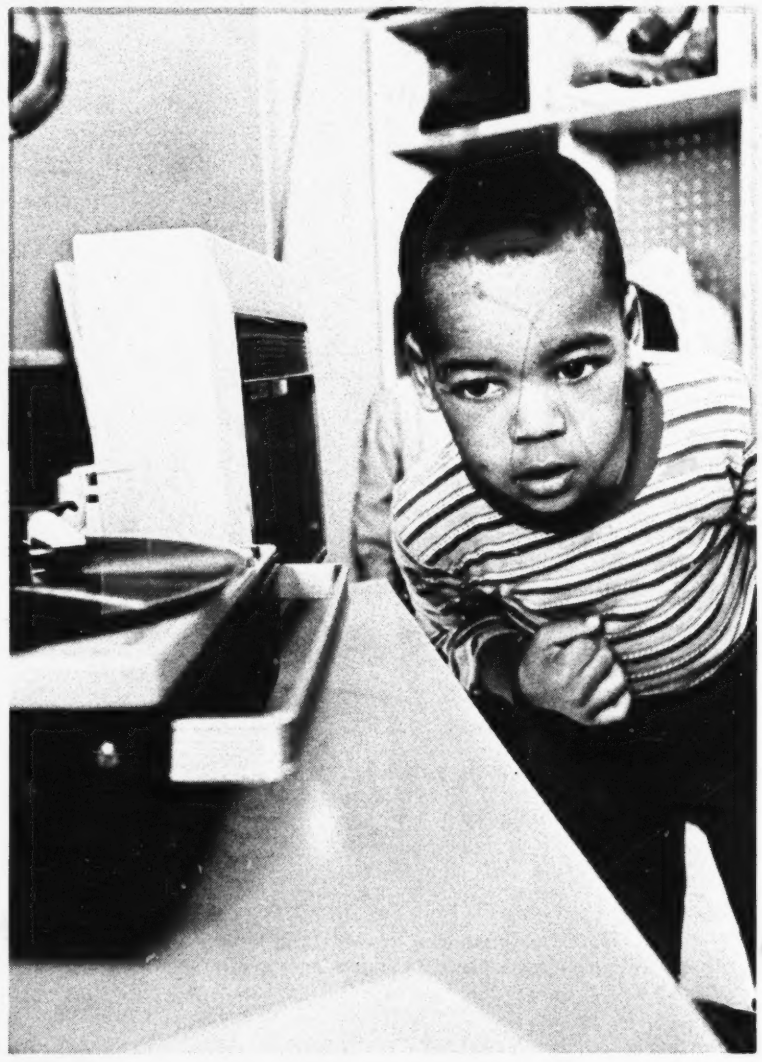


"Stopping a child from doing something wrong is not the same as getting him to perform properly," says one of the EIP's study reports on behavior modification. "There are innumerable ways in which the youngster can misbehave, and stopping one of them is no guarantee that a second unfavorable one will not be elicited."

EIP's classrooms might appear wild to the casual, unprepared visitor. The noise level is high. Children run about. Three different groups of youngsters may be doing three different, noisy things in corners of a classroom at the same time.

The child isn't punished when he runs around the room instead of sitting in his seat and listening. Instead, he soon learns that if he sits in his seat and listens, he may get a chocolate, a shiny trinket, or a pencil and pad of paper.

"Candy works pretty well with these children, because they're usually hungry," Spaulding says. "After a while, the teacher doesn't have to give the candy any more."

When a child does something really bad or inappropriate, such as stab Susie in the hand with a pencil point, he is punished, but not in the normal, school sense of the word. Punishment, in Durham's EIP, consists of withdrawing the child from the classroom for specific periods of time. The classroom is where the rewards are. Being out of the classroom means being away from where the candies are being passed out for good behavior or for good work.

Experience has convinced the EIP staff that the system works. Pointing to a series of graphs and charts about one child, Spaulding said, "He is now a very solid citizen. It took about three months to convert him from one of the most disturbing children in the room to one of the most co-operative."

"We know that behavior modification will work," he said. "There's not much of it going on in the public schools. It has been used with abnormal children, but not with normal kids. This is something we didn't know we could do when we started."

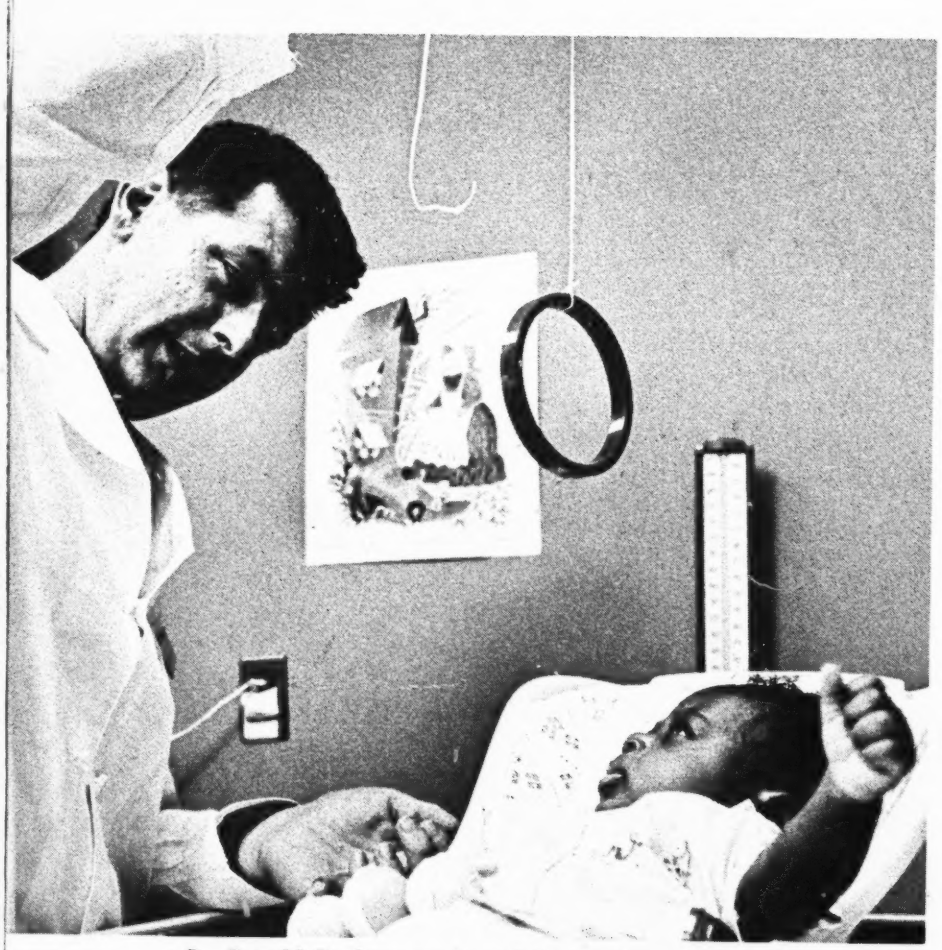
The EIP study notes that the "rewards" system may not strike a responsive chord with teachers.

"Some teachers' initial reactions to the giving of candy or food rewards to children is that they fear they will become a cafeteria dispenser, doling out a variety of 'goodies' to the children," says the document. "This is a wrong conception, however. The food rewards merely highlight the proper behavior being reinforced. There are good reasons to believe that once the proper behavior is manifested, and the student realizes he's being rewarded for it, then the food reward becomes unnecessary, and systematic verbal praise can be substituted." [*See "From Words to Sentences,"* SOUTHERN EDUCATION REPORT, *Jan.-Feb.*]

Behavior modification is, however, just a technique, although possibly an important one, and only a very small part of EIP's work in Durham. A good way to examine the many facets of the program is to begin with its lowest level.

Durham's EIP staff and social workers have been going into three poverty areas in the city of Durham and the county outside hunting for expectant mothers. The pregnant women they have signed up agree to let their as-yet unborn children take part in EIP's research. When the babies are born (nearly always in the Duke University Hospital) a neurologist and pediatrician associated with EIP are standing by, along with the mother's obstetrician. They begin testing the new-born infant, taking measurements and recording initial intelligence response levels. For the first year, the child is brought to the hospital once every six weeks for measurements and testing of its response capabilities. For the second year, the tests are carried out once every three months.

"What we're finding," said Dr. Spaulding, is that



Dr. Donald Stedman works at infant-testing, which begins soon after birth. Intelligence responses are noted frequently.

poverty children "start off quite well in life and start decelerating in their growth rate after 18 months. They crawl earlier and they walk earlier than middle-class children." At about 18 months, the intelligence growth of poverty children begins to fall below that of their middle-class counterparts, he said. "And, by the time they get to school, their average IQ is 70 or 80 while that of the middle-class child is about 100."

Having shown that lower intelligence among poor Negro and white youngsters is not genetic, the Durham EIP is seeking ways to help them catch up once they are in school.

EIP has a wide variety of classrooms in three schools. Two are in the city; one is in a rural area just outside. About 130 students were enrolled in the classroom program last year. There were nursery schools for two-year-olds, three-year-olds and four-year-olds. There were kindergartens for five-year-olds (North Carolina's public-school system does not include kindergarten), and first-grade classes for six-year-olds.

Special teaching techniques and aids are used in all the classes. None are new and original with the Durham EIP, but a variety used in other parts of the country has been brought together. Unlike the case in most school systems, learning is not based on memory, recall or repetition. In all cases, concrete examples and materials are used.

"We start with a concrete experience and ask the child to examine, compare, observe and sort out," Spaulding said. "Out of this comes the ability to imagine and think."

Preschoolers, for example, learn reading and writing through the "sounds and color" method. In this, children learn from large wall charts that different colored letters or groups of letters make different sounds when placed with other colors. A lavender "s" is sounded like the "s" is "as." A green "s" sounds like the "s" in "miss." And, they learn through experience that a blue "s" is like the "s" sound in "sugar."

Cusenaire Rods, a new approach to teaching arithmetic, are used. So are adaptations by EIP's teachers of various other new teaching aids.

The children at all levels do things with their hands and bodies. They go places on field trips and see things. They paint and color. They make things. They act out what they have seen or heard. In several preschool classes, students use large pieces of wood and wooden tools to make a house that they can get inside. Thus, they get a glimmer that man (and therefore they, themselves) can manipulate his own environment.

One class visits the nearby Raleigh-Durham Airport, examining everything and watching and listening to the operations of the control tower. Later, back in school, they build mock runways and act out the roles of pilots, passengers and control-tower operators. Special reading programs are being put into use, including reading tests with nonsense statements that the child must decide are incorrect in order to find the correct sentence.

In all of the classrooms, a constant program of research and evaluation is under way. A first-grade class with 20-25 students may have as many as three teachers, all busy in different parts of the room at once. At the same time, observers will be taking notes at the rear.

Through testing, EIP is able to compare how its children of poverty stack up against school youngsters from middle-income families. "On conventional tests," says Spaulding, "they do about as well as kids in other schools and a little better on tests involving thinking. Later, we would expect our kids to do better because they will be in situations where kids do not just depend on memory."

EIP watches its students as they move along, from year to year. Researchers will study how well a child does in a regular third-grade class after he has had one, two or three years of preschool instruction. Those who start in the program as infants are placed into the preschool courses at different ages. Eventually, the project hopes to come up with an evaluation of how soon and with what kinds of teaching methods poverty children need to be started in classroom situations in order to succeed in later public-school years.

EIP's full-time staff numbers 100 persons, most of them teachers. An important part of the project is the effort of five social workers whose main function is to try to keep the youngsters in school.

"There's a high rate of illness in these families," Spaulding said. "If a child is out of school, the social

worker goes to the home immediately to see why. Sometimes it's a situation where the mother is lonesome and just wants someone—the child—home to talk to her and give her companionship. There's a constant crisis. Someone gets knifed, shot, or someone's son gets sent to prison. There are always all kinds of problems with these families; they're high-risk families. Most of them don't have water in the home."

In addition, EIP has a "future parents" program for white and Negro teen-agers who are on the verge of becoming school dropouts. Forty seventh-graders started out in the program last fall and 26 were still in it at the end of the school year. The others had dropped out of school and out of sight, to become sooner or later the parents of children in poverty.

In this program, substituted in high school for a North Carolina history course, EIP staff members teach the students subjects that might help them when they did drop out—occupational choices, economics, banking and the management of finances, and family income planning. In addition, EIP tested the teen-agers in an effort to find out what happens to a poor youngster just before he or she drops out of school. As a result, the program will include special language classes next year.

With the exception of the graded classes, all the project is strictly voluntary. All of the classes are held at public schools, under a co-operative arrangement with the Durham City and County Boards of Education.

Among the city's Negro population, especially, EIP is considered an honor. Parents want to get their children into the program. EIP keeps the children's mothers in close touch with the program. Numerous special meetings of parents are held and the organization publishes a regular EIP newsletter for parents, written by the mothers at various schools.

All of EIP's staff are employed by Duke University, with N.C. College in Durham, a Negro institution, the major administering agency other than the Durham school systems. In addition, EIP has a close relationship with Operation Breakthrough, Durham's antipoverty agency.

The project was conceived by Dr. Donald Stedman, a Duke psychologist who is now EIP's research and evaluation director. The five-year Ford Foundation grant that supports the project amounts to $2.95 million. The program will run until 1970.

Spaulding, 43, earned his doctor's degree in elementary education at Stanford University. His professional experience includes stints as a school principal and experimental director, and he has published professional articles on child behavior and development.

Spaulding believes the nation's public-school system is going to have to change its ways in order to teach children who come from homes of poverty. "It's hard to change the public-school system," he says, "because the whole country is geared to do a different job. They're not geared to deal with these kids, but our techniques do just as well with middle-class youngsters."